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a storage device storing a predefined criterion, and having a monitoring module thereon; and

E1 a processing device executing the monitoring module to transmit at least one instruction to the network, the at least one instruction being executed on the network and requesting a performance of a monitoring operation to monitor the information on the network as a function of the predetermined criterion, the processing device is adapted to receive data from the network based on at least one result of the monitoring operation.

Please add new claims 87 and 88, as follows:

E2 -87. (New) The apparatus of claim 84, wherein the at least one event detects changes on the network.

88. (New) The method of claim 85, wherein the at least one event detects changes on the network.—.

### REMARKS

#### I. GENERAL

Claim 52 has been amended merely to remove a minor informality therefrom. Attached hereto, please find a marked-up version of the claim change(s)

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made by the current amendment. The attached pages with the claim change(s) marked appropriately is captioned as "**VERSION WITH MARKINGS TO SHOW CLAIM CHANGES MADE**". Now claims 87 and 88 have been added to the above-identified application. Accordingly, claims 38, 39, 41-59 and 61-88 are now under consideration in the present application. Applicants respectfully submit that no new matter has been added.

**II. THE REJECTIONS UNDER 35 U.S.C.  
§§ 102(e) AND 103(a) SHOULD BE WITHDRAWN**

Claims 38, 39, 41-43, 50-59, 61-63, and 70-86 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,809,238 issued to Greenblatt et al. (the "Greenblatt Patent"). Claims 44 and 64 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the Greenblatt Patent, in view of U.S. Patent 6,134,555 issued to Chadha et al. (the "Chadha Patent"). Claims 45-47 and 65-67 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the Greenblatt Patent, in view of U.S. Patent 5,893,091 issued to Hunt et al. (the "Hunt Patent"). Claims 48, 49, 68 and 69 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the Greenblatt and Hunt Patents, in view of A. Prasad Sistla et al., "Temporal Conditions and Integrity Constraints in Active Database Systems" (the "Sistla Publication"). It is respectfully asserted that amended independent claims 38, 42, 43, 52, 53, 58, 62, 72, 73, 78, 80, 82, 83 and 86 and the claims which depend from these independent claims are in no way taught or suggested by the Greenblatt Patent, taken

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alone or in combination with the Hunt Patent and the Sistla Publication for at least the reasons as set forth below.

In order to render a claim anticipated under 35 U.S.C. § 102, a single prior art reference must disclose each and every element of the claim in exactly the same way. See Lindeman Maschinenfabrik v. Am Hoist and Derrick, 730 F.2d 1452, 1458 (Fed. Cir. 1984).

In order for a claim to be rejected for obviousness under 35 U.S.C. § 103, not only must the prior art teach or suggest each element of the claim, the prior art must also suggest combining the elements in the manner contemplated by the claim. See Northern Telecom, Inc. v. Datapoint Corp., 908 F.2d 931, 934 (Fed. Cir.), cert. denied 111 S.Ct. 296 (1990); see In re Bond, 910 F.2d 831, 834 (Fed. Cir. 1990).

Applicants' invention, as recited in independent claim 38, relates to an apparatus for monitoring information on a network. The apparatus comprises, *inter alia*:

a storage device storing a predefined criterion, and having a monitoring module thereon; and

a processing device executing the monitoring module to transmit at least one instruction to the network, the at least one instruction being executed on the network and requesting a performance of a monitoring operation to monitor the information on the network as a function of the predetermined criterion, the processing device is adapted to receive data from the network based on at least one result of the monitoring operation ...

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Independent claims 42, 52, 53, 80 and 83 relate to apparatuses, independent claims 58, 62, 72, 73, 78 and 82 relate to methods and independent claim 86 relates to a software arrangement which include similar recitations.

The Greenblatt Patent relates to data processing techniques (i.e., relational data bases) for collecting and managing data such as techniques for monitoring the performance of computer networks. (See Greenblatt Patent, column 1, lines 13-18). In particular, a computer network 10 of the Greenblatt Patent includes a plurality of user application U1 through U<sub>n</sub> which monitor networked platforms P1 through P<sub>n</sub>. The computer network 10 also includes a DataServer 14 which may be located on any of the platforms or on a specialized platform which is linked with the networked platforms P1 through P<sub>n</sub> by a transport network 12. (See *id.*, column 4, lines 8-11 and 24-28; and Fig. 1). The user applications U1 through U<sub>n</sub> collect data from the networked platforms P1 through P<sub>n</sub> on the network by issuing (SQL) requests to the DataServer 14, and receive results back from the DataServer 14. As a part of this request for data, the user applications can specify certain requests that collect data on the network. ( See *id.*, column 2, lines 28 - 38).

The data returned from the networked platforms P1 through P<sub>n</sub> can be tested by an Event level probe to determine if the data has changed state from passing to not passing the predicate test or from not passing to passing the predicate test, and inhibiting the return of data that has not changed state. (See *id.*, column 2, lines 45-50).

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Different expressions as rules are stored in a Rule Table 34 of the DataServer 14. (See id., column 7, lines 9-11). Examples of the rules are provided in Figs. 2-6.

According to the Greenblatt Patent, a probe module 18 of the DataServer 14 continues retrieving data from the heterogeneous data sources P1 through P<sub>n</sub> over the transport network 12. (See id., column 5, lines 32-36). This is performed using recursive queries to probe the DataServer 14 with the SQL statement 30 to determine when data meeting the predicate test has been collected and the data to be returned has been collected and is available for return to the requesting user application. (See id., column 7, lines 31-37). Moreover, when the data is returned from the data sources by the probe 18, the filter 36 checks when predicates are satisfied, and returns only the data back to the application satisfying filtered conditions. The determination of whether the monitoring condition has been satisfied is performed by the filter 36 as a part of the DataServer 14, and not on the network 12. ( See id., column 10, lines 7-10).

The Hunt Patent relates to a system and method for managing and distributing information in the form of alerts that are divided into a keyword-part and an argument-part over a data network. (See Hunt Patent, column 4, lines 38-44). The system and method are based on a server-push model, and deliver user notifications of new information posted by participating content providers (i.e., Timely Information Providers) via IP Multicast. (See id., column 4, lines 44-47). In particular, the Timely Information Server 4 sends the alert over the computer network using the IP Multicast. The alert is received by subscriber clients 8a, 8b, 8c which compare the keywords in the

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alert to their local keyword profiles 10a, 10b, 10c using a predetermined logical (Boolean) expression, and display the alerts which satisfy the expression. (See id., column 7, line 63 to column 8, line 3).

As described in the Hunt Patent, the Timely Information Providers 2d send information to the Timely Information Server 4, or the Timely Information Server 4 can go out and collect the information from the Timely Information Providers 2d. (See id., column 8, lines 8-12). The Timely Information Server 4 analyses the incoming information, and compares it with its Keyword Dictionary 6 to create an alert, which is sent over the network. (See id., column 8, lines 12-15). The alert is received by the client computer 8d which compares the keywords in the alert to their local keyword profile 10d using the logical expression. If the criteria of expression is satisfied, the client computer 8d notifies the user of the presence of the alert 12. (See id., column 8, lines 15-20). At the same time the client 8d receives the information from the Timely Information Providers 2d, a tracking information packet is sent 15 to the Timely Information Server 4 specifying that the user/client has acted upon the received alert. (See id., column 8, lines 28-31). According to the Hunt Patent, a Branded Information Server 20 (which post new content on their Internet Servers) sends the alert over the network via the IP Multicast to the client 8a who has subscribed (registered) to receive alerts from a Branded Information Server 18. (See id., column 8, line 52-55).

Alert notification of the Hunt Patent starts with the user initially defining a profile of interest (i.e., a set of keywords and a search expression) through a definition

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webpage upon the registration with the Timely Information Server 68 for the first time, and a keyword profile file is created on the user's machine. (See *Id.*, column 11, lines 36-41). The profile can be updated by accessing the Timely Information Server's profile definition webpage. When alert's keywords match the filtering criteria defined in the user's keyword profile, the client application alerts the user. (See *Id.*, column 11, lines 41-46).

**A. CLAIMS 38, 39, 41, 42, 45, 46, 52, 53, 58, 59, 61, 62, 65, 66 AND 72-83**

Applicants respectfully assert that the Greenblatt Patent, taken alone or in combination with the Hunt Patent and the Sistla Publication, do not teach or suggest, much less disclose an apparatus or method for monitoring information on a network in which, *inter alia*, a monitoring module is executed to transmit at least one **Instruction to the network, with this instruction being executed on the network** requesting a performance of a monitoring operation to monitor the information on the network, as explicitly recited in independent claims 38, 42, 52, 53, 58, 62, 72, 73, 78, 80, 82, 83 and 86 of the above-identified application. In the Office Action dated April 24, 2002, the Examiner alleges that the probes 16, 18 of the Greenblatt Patent are equivalent to the processing device of Applicants' apparatus claims in column 6, lines 8-16 of the Greenblatt Patent, and apparently believes that their functions disclose this recitation. (See Office Action dated April 24, 2002, page 3, line 1).

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Applicants respectfully assert that the Greenblatt Patent in no way teaches or suggests, much less discloses that **at least one instruction is transmitted to the network and executed on such network**. In particular, the disclosure of the Greenblatt Patent explicitly provides that "the return data from the DataProbe 18 is tested by predicate test processor, or filter, 36, to determine if the data has achieved its predicate ... ." (See *id.*, column 10, lines 7-10). Thus, the determination and monitoring of data is performed on the filter 36 of the DataServer 14 of the Greenblatt Patent, and not on the network. Indeed, the Greenblatt Patent nowhere mentions that any monitoring or determination can be performed by executing at least one instruction on the network. On the contrary, the probe 18 and the filter 36 of the DataServer 14 are responsible for determining whether certain conditions have occurred. Thus, the probe 18 and the filter 36 of the Greenblatt Patent perform the determination of these conditions *locally* (which was apparently equated by the Examiner to the monitoring operation), but not on the network 12. Accordingly, the Greenblatt Patent does not teach or suggest, much less disclose that such **instruction is executed on the network**, especially so as to request the performance of the monitoring operation to monitor the information on the network, as recited in independent claims 38, 42, 52, 53, 58, 62, 72, 73, 78, 80, 82, 83 and 86 of the above-referenced application.

In addition, at least because the Greenblatt Patent does not teach or suggest the above-mentioned *monitoring operation* recited in Applicants' independent claims, the Greenblatt Patent also does not teach or suggest that the data is received



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from the network based on at least one result of the monitoring operation, as also recited in these independent claims. The Hunt Patent and the Sistla Publication does not cure at least the above-described deficiencies of the Greenblatt Patent to teach or suggest Applicants' invention as recited in independent claims 38, 42, 52, 53, 58, 62, 72, 73, 78, 80, 82, 83 and 86, nor does the Examiner contend that they do.

Further, with respect to claims 42 and 62, these independent claims also recite that the information includes at least one event and at least one condition. In the Office Action dated April 24, 2002, the Examiner apparently points to column 13, line 48 through column 16, line 61, and Fig. 6 of the Greenblatt Patent for disclosing this recitation. However, the Greenblatt Patent only checks if a particular condition is true (e.g., CPU\_UTIL > 95%), but does not monitor both the event and the condition, as recited in independent claims 42 and 62.

With respect to claims 53 and 73, these independent claims also recite that the result includes a copy of a portion of at least one monitored predicate. In the Office Action dated April 24, 2002, the Examiner apparently points to column 10, lines 36-44 for disclosing this subject matter. However, contrary to the Examiner's belief, the Greenblatt Patent does not provide any result that includes a copy of a portion of the monitored predicate, as recited in independent claims 53 and 73.

Other claims depend from at least one of the independent claims described above. Thus, the arguments discussed above with respect to independent

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claims 38, 42, 52, 53, 58, 62, 72, 73, 78, 80, 82, 83 and 86 also apply to their dependent claims.

**B. CLAIMS 43, 44, 47, 55, 63, 64, 67 and 75**

Further, claims 43, 44, 47 and 55, and claims 63, 64, 67 and 75 depend from independent claims 38 and 58, respectively. Accordingly, the arguments presented above for independent claims 38 and 58 apply equally to claims 43, 44, 47, 55, 63, 64, 67 and 75.

Also, with respect to claims 43 and 63, these claims recite that a **THEN portion (of a rule-based criteria) includes a probing action which has at least one probing operator**. It was previously asserted by Applicants that the "THEN" portion of the notification criteria of the Greenblatt Patent is arguably the parameters of the "SELECT" clause. In clear contrast to the teachings of the Greenblatt Patent, independent claims 43 and 63 explicitly recite that the THEN portion includes a **probing action**. Applicants respectfully assert that this recited probing action cannot be equated to the parameters of the "SELECT" clause of an SQL query of the Greenblatt Patent. This is because these SELECT clause parameters do not perform any "probing operation", or include any "probing action". However, Applicants' claimed "probing" operation can be equated to "an exploratory investigation". Thus, at least for this additional reason and the reasons presented above, the Greenblatt Patent in no way

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teaches or suggests, much less discloses the subject matter recited in claims 43 and 63.

With respect to claims 44 and 64, these claims depend from claims 43 and 63, respectively. Accordingly, the arguments provided above for claims 43 and 63 are applicable to claims 44 and 64. In addition, claims 44 and 64 recite that **the probing operator includes a data mining query**. In the Office Action dated April 24, 2002, the Examiner admits that the Greenblatt Patent does not disclose that the probing operator includes a data mining query, but alleges that the Chadha Patent teaches a data mining query. (See Office Action, dated April 24, 2002, page 9, lines 5-7). The Examiner points to column 4, lines 4-28 of the Chadha Patent in support of such belief. However, contrary to the Examiner's allegation, Applicants respectfully assert that there is absolutely no teaching or suggestion in these portions of the Chadha Patent or in any other section thereof of the probing operator which includes a data mining query.

In addition, Applicants respectfully assert that the Greenblatt patent provides absolutely no *teaching, suggestion, motivation or incentive* to utilize data mining techniques in its monitoring system. Indeed, there is no need to use any data mining techniques for the procedure executed by the probe 18 and the filter 36 of the Greenblatt Patent. Thus, the disclosure of the Greenblatt Patent would not teach or suggest to one having ordinary skill in the art to combine it with prior art data mining systems or methods.

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Thus, at least for this additional reason and the reasons presented above, the Greenblatt Patent in no way teaches or suggests, much less discloses the subject matter recited in claims 44 and 64.

With respect to claims 47 and 67, these claims depend from claims 43 and 63, respectively. Accordingly, because the Hunt Patent does not cure the deficiencies of the Greenblatt Patent described above, the arguments provided above for claims 43 and 63 are applicable to claims 47 and 67. In addition, claims 47 and 67 recite that an **atomic condition (of a complex condition of the IF portion) includes at least one literal portion**. In the Office Action, the Examiner apparently equates the literal portion of Applicants' claimed invention to some data of the Hunt Patent. (See Office Action dated April 24, 2002, page 10, lines 1-2).

However, Applicants again respectfully assert that the literal portion recited in these claims is a term of the art of logic programming and databases (e.g., a relation in a relational database, or a predicate or a negation of a predicate in a logic program), and not a mere data. One example of a literal portion is such that it can be used to search for stores which sell jeans but not jackets. However, the alleged combination of the Greenblatt Patent and the Hunt Patent system is not capable of using such literal portion, nor was the literal portion disclosed therein, either explicitly or implicitly. Thus, at least for this additional reason and the reasons presented above, the Hunt Patent in no way teaches or suggests, much less discloses the subject matter recited in claims 47 and 67.

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With respect to claims 55 and 75, these claims recite that **the event includes an atomic event and/or a combination of events**. In the Office Action dated April 24, 2002, the Examiner believes that the Greenblatt Patent discloses an atomic condition and a combination of atomic conditions in the rule table of Fig. 6. However, the Examiner does not point to any portion of the Greenblatt Patent to disclose that the event includes an atomic event and/or a combination of events. Thus, at least for this additional reason and the reasons presented above, the Greenblatt Patent in no way teaches or suggests, much less discloses the subject matter recited in claims 55 and 75.

With respect to claims 57 and 77, these claims recite that **the WHEN portion of the rule-based criterion is used to monitor for an occurrence of at least one event**. In the Office Action dated April 24, 2002, the Examiner believes that the Greenblatt Patent discloses an atomic condition and a combination of atomic conditions in column 7, lines 31-40 thereof. However, Applicants respectfully assert that the Greenblatt Patent discloses the "WHERE" clause, but not the "WHEN" clauses. Indeed, Applicants' claimed invention recited in claims 57 and 77 includes "WHEN" clauses that are time dependent and deals with event, and not with conditions, while the "WHERE" clauses of the Greenblatt Patent are not time dependent. Thus, at least for this additional reason and the reasons presented above, the Greenblatt Patent in no way teaches or suggests, much less discloses the subject matter recited in claims 57 and 77.

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With respect to claims 84 and 85, these claims recite that **the event is detected on the network**. As discussed above with reference to the independent claims of the above-referenced application, the Greenblatt Patent's probe 18 or the filter 36 detect any change of condition on the DataServer 14, and not on the network 12. (See Greenblatt Patent, Fig. 1). Accordingly, the Greenblatt Patent does not teach or suggest, much less disclose that the events are detected on the network, as recited in claims 84 and 85.

### **C. SUMMARY**

Accordingly, the Greenblatt Patent, taken alone or in combination with the Hunt Patent and the Sistla Publication, does not teach or suggest, much less disclose the subject matter recited in independent claims 38, 42, 52, 53, 58, 62, 72, 73, 78, 80, 82, 83 and 86, and the claims which depend therefrom. Therefore, an affirmation of patentability is respectfully requested for pending claims 38, 39, 41-59 and 61-86.

### **III. NEW CLAIMS 87 AND 88**

New claims 87 and 88 are presented to cover further aspects of Applicants' invention. Support for new claims 87 and 77 can be found throughout the specification and in the drawings. The new claims 87 and 88 depend from, and thus include all of the recitations of independent claims 38 and 58, respectively. Accordingly, for at least the reasons presented above with reference to independent claims 38, 42,

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52, 53, 58, 62, 72, 73, 78, 80, 82, 83 and 86, Applicants respectfully submit that claims 87 and 88 are allowable over the Greenblatt Patent, taken alone or in combination with the Hunt Patent and the Sistla Publication.

#### IV. CONCLUSION

In light of the foregoing, Applicants respectfully submit that pending claims 38, 39, 41-59 and 61-88 are in condition for allowance. Prompt reconsideration and allowance of the present application are therefore earnestly solicited.

Respectfully submitted,

Dated 26 August 2002

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**VERSION WITH MARKINGS TO SHOW CLAIM CHANGES MADE**

52. (Thrice Amended) An apparatus for monitoring information on a network,  
comprising:

a storage device storing a predefined criterion, and having a monitoring  
module thereon; and

a processing device executing the monitoring module to transmit at least  
one instruction to the network, the at least one instruction being executed on the  
network and requesting a performance of a monitoring operation to monitor the  
information on the network as a function of the predetermined criterion, the processing  
device is adapted to receive data from the network based on at least one result of the  
monitoring operation[.].



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